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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,593	02/18/2004	Eric T. Martin	200208787-1	6308

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EXAMINER	
THOMAS, BRANDI N	

ART UNIT	PAPER NUMBER
2873	

MAIL DATE	DELIVERY MODE
07/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/782,593	Applicant(s) MARTIN ET AL.	
	Examiner Brandi N. Thomas	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 20-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-19 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/23/05</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 13-19 and 34 in the reply filed on 6/21/07 is acknowledged.

Information Disclosure Statement

2. Acknowledgement is made of receipt of Information Disclosure Statement(s) (PTO-1449) filed 5/23/05. An initialed copy is attached to this Office Action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 13-19 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin et al. (2004/0218341 A1).

Regarding claims 13 and 34, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), comprising: time modulating a control signal to represent a desired gap (48) between the fixed plate (42) and the electrostatically movable plate (44) (section 0014); selectively routing a charge to array elements (N and M) each including control circuitry (40) and one of the plurality of electro-mechanical devices (34)

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(figure 4 and section 0045); and displacing the electrostatically movable plate (44) in response to the controlled current output (section 0013).

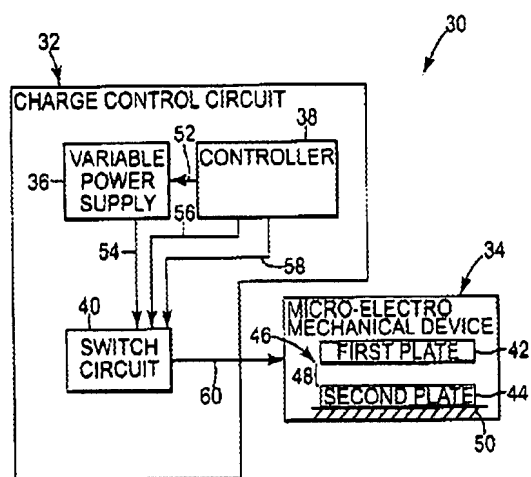


Fig. 1

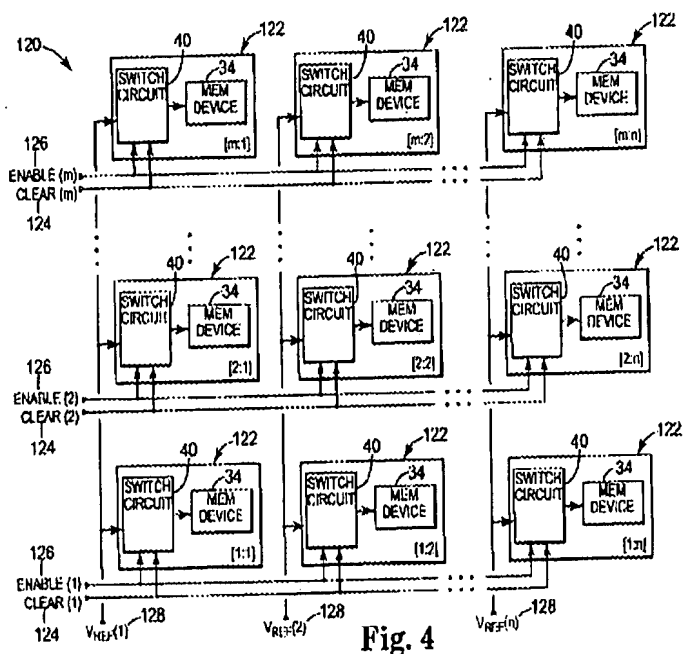


Fig. 4

Regarding claim 14, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), wherein selectively routing a charge comprises selectively mirroring a reference current onto a controlled current output coupled to the MEMS device (34) on the basis of the time modulated control signal (section 0014).

Regarding claim 15, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), wherein selectively mirroring the reference current selectively mirrors the reference current onto a plurality of controlled current outputs, each of the plurality of controlled current outputs being coupled to one of a plurality of MEMS devices

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(section 0045), and wherein displacing the electrostatically movable plate displaces an electrostatically movable plate (44) in each of the plurality of MEMS devices (34) in response to a corresponding controlled current output (section 0046).

Regarding claim 16, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), further comprising: generating the reference current (section 0046).

Regarding claim 17, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), further comprising: adjusting the reference current to represent the desired gap (48) between the fixed plate (44) and the electrostatically movable plate (42) (sections 0014 and 0046).

Regarding claim 18, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), wherein selectively mirroring the reference current onto the controlled current output generates a variable voltage compliant controlled current output (sections 0014 and 0046).

Regarding claim 19, Martin et al. discloses in figures 1 and 4, a method of controlling a gap (48) between at least one fixed plate (42) and an electrostatically movable plate (44) in a MEMS device (34) (sections 0013 and 0014), further comprising selectively setting a predetermined charge in the MEMS device (34) before displacing the electrostatically movable plate (42) in response to the controlled current output (sections 0014 and 0046).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandi N. Thomas whose telephone number is 571-272-2341.

The examiner can normally be reached on Monday - Thursday from 6-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brandi N Thomas
Examiner
Art Unit 2873


BNT
July 2, 2007


RICKY MACK
SUPERVISORY PATENT EXAMINER